



A.D. 1851 N° 13,674.

S P E C I F I C A T I O N

OF

RICHARD EDWARD HODGES
AND
WILLIAM BROCKEDON.

SURGICAL INSTRUMENTS.

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Surgical Instruments

HODGES AND BROCKEDON'S SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, we, RICHARD EDWARD HODGES, of Southampton Row, in the County of Middlesex, Gentleman, and WILLIAM BROCKEDON, of Devonshire Street, in the same County, Gentleman, send greeting.

5 WHEREAS Her present most Excellent Majesty Queen Victoria, by Her Royal Letters Patent under the Great Seal of the United Kingdom of Great Britain and Ireland, bearing date at Westminster, the Twenty-fourth day of June (One thousand eight hundred and fifty-one), in the fourteenth year of Her reign, did, for Herself, Her heirs and successors, give and grant unto
10 us, the said Richard Edward Hodges and William Brockedon, our exors, admors, and assigns, Her especial licence, full power, sole privilege and authority, that we, the said Richard Edward Hodges and William Brockedon, our exors, admors, and assigns, or such others as we, the said Richard Edward Hodges and William Brockedon, our exors, admors, or assigns,
15 should at any time agree with, and no others, from time to time and at all times during the term of years therein expressed, should and lawfully might make, use, exercise, and vend, within England, Wales, and the Town of Berwick-upon-Tweed, in the Islands of Jersey, Guernsey, Alderney, Sark, and Man, and in all Her Majesty's Colonies and Plantations abroad, our
20 Invention of "IMPROVEMENTS IN SURGICAL INSTRUMENTS;" in which said Letters Patent is contained a proviso that we, the said Richard Edward Hodges and William Brockedon, or one of us, shall cause a particular description of the

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nature of our said Invention, and in what manner the same is to be performed, by an instrument in writing under our hands and seals, or under the hand and seal of one of us, to be inrolled in Her Majesty's High Court of Chancery within six calendar months next and immediately after the date of the said in part recited Letters Patent, as in and by the same, reference being there- 5 unto had, will more fully and at large appear.

NOW KNOW YE, that in compliance with the said proviso, we, the said Richard Edward Hodges and William Brockedon, do hereby declare that the nature of our said Invention, and the manner of performing the same, are fully described and ascertained in and by the following statement thereof, 10 reference being had to the Drawing hereunto annexed, and to the figures and letters marked thereon, that is to say:—

Our Invention consists,—

First, of improvements in surgical instruments to be introduced into passages or orifices in cases where it is desired that parts of the instruments may 15 expand when within passages or orifices. And,

Secondly, our Invention consists of improvements in surgical instruments for relieving the bowels, urinary organs, and other passages.

And in order that our Invention may be most fully understood and readily carried into effect, we will proceed to describe the means pursued by us. 20

DESCRIPTION OF THE DRAWINGS.

Figures 1 and 2 shew an apparatus constructed according to our Invention, and suitable to be introduced into a passage or orifice, such, for instance, as where there is a stricture. Figure 1 shews the instrument in the extended condition, and as to admit of its being passed into a passage with the least 25 inconvenience. Figure 2 shows the form it will assume when within the passage. *a* is a tube of metal, and *b* is a close or open end of metal, and these two parts are connected together by means of an india-rubber tube, by preference of vulcanized india-rubber, *c*, of the diameter shewn at Figure 2. *e* is a rod or stem passing through the tube *a*, and fixed to the end *b*. The instru- 30 ment is shown to be straight, but it may, if desired, be made slightly bent, and if there be an opening or openings through the part *b*, fluid may flow through the apparatus. In using this apparatus, supposing it be for extending or opening a stricture in the uretha, the instrument in the extended state, as shewn at Figure 1, would be introduced, and then by releasing the chain *d* 35 (or other fastening used to keep the india-rubber tube extended) the india-rubber will contract in length and expand in diameter, and will thereby cause the passage where the stricture is to be opened or enlarged, and so kept during the time that the instrument is retained in the passage, and the instrument

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may be again readily withdrawn by first extending the india-rubber tube in length so as again to bring it to the condition, Figure 1.

Figures 3 and 4 show another form of instrument suitable for a horse or other animal. In this instrument there are four tubes or it may be substances
5 of india-rubber, and the parts *e* and *b* in this case are joined together, and may have a passage through for drawing off fluid. The object of having four or more expanding parts of india-rubber is, that they may be extended in succession with comparatively little force, and this is desirable where the instrument is of large size. In using this instrument the parts are to be
10 brought into the position, Figure 3, and then introduced into the passage or orifice; the india-rubber is then to be allowed slowly to expand in succession, and when the instrument is to be withdrawn the india-rubber is to be caused to contract in diameter and extended in length. We would remark, in respect to this instrument, that its details may be varied so long as its peculiar
15 character be retained and india-rubber so used, that it shall be of small diameter when introduced into a passage or orifice, and expanded in diameter when within the passage or orifice.

Another improvement consists in constructing and using instruments of india-rubber to plug up gun-shot and other wounds. The most convenient
20 form for these instruments is tubular, though solid plugs may be employed. For this purpose I prefer to use tubes of india-rubber with a short cord or string fixed to each end, and such as readily to enable a person to extend the india-rubber in length, and consequently to decrease the same in diameter. In using such an instrument, supposing there to be a gun-shot wound, the
25 string or cord at one end of the instrument would be first passed through, and then by pulling out the india-rubber in length it would be brought to such a diameter as readily to be drawn through the wound, when the india-rubber would be allowed to expand (by slackening the pull on the strings or cords) when it would most effectually plug the wound.

30 We will now describe the second part of our Invention, which consists of constructing instruments for assisting excretions by means of partially-exhausted receivers or vessels. Such vessels may be made of any material which can be fitted for the purpose, but that which we prefer is gutta percha, because it is firm enough to resist external pressure when subjected to the
35 degree of exhaustion necessary for effecting the object of the Invention, yet capable of being moulded to the form required so as to become air-tight, and yet fit against the person without painful pressure. When a convenient form as a recipient had been made, the aperture is to be applied to the patient, it having been previously immersed in warm water, by which it will have become

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so soft and plastic that not only its edge may be turned over or rounded, but when warm and pressed even gently against the part of the person, the aperture of the recipient may be made to assume the form to cause it to fit accurately to the person and thus aid its becoming air-tight. When applied for use we would state, that whatever be the form of vessel used as a recipient, 5 a very convenient mode of causing the opening to attach itself air-tight to the person is to surround the edge with vulcanized india-rubber. The vessel is to be provided with a suitable connection for an air pump or exhausting apparatus, and a suitable valve to admit air when the vessel is to be removed. When once correctly made of gutta percha it is to be used in the hard or cold 10 state, and when applied to the person two or three strokes of the pump will (by destroying the balance of pressure) attach the vessel to the person, and further exhaustion will produce the effect of relieving the patient without the pain and irritation which so commonly attend applications for such relief. To release the instrument the air valve or cock is to be opened. 15

In its application to cows to extract milk, the most convenient means of carrying out our Invention we believe to be by a shield to receive the teats through apertures. When pressed upwards in contact with the udder, the shield is to be secured air tight to the vessel which is to relieve the milk, and this vessel is to be sustained in its place by a band or straps fastened over the cow's loins 20 or otherwise, to keep the vessel in its place and to bear the weight of the milk withdrawn. This vessel is to be exhausted of air to the extent required by an air pump or other apparatus connected thereto, and when as much milk as is required has been obtained, a valve is to be opened to admit air and allow the vessel to be detached. The shield for the teats may form a part of the vessel, 25 and act as a cover or air-tight top. Or the milk pail or vessel may be placed on the ground or other convenient position and connected by a pipe with the udder shield, which latter should terminate in an air-tight funnel connected with the milk pail.

Having thus described the nature of our Invention, and the manner of 30 performing the same, we would have it understood that what we claim is the construction of surgical instruments herein described.

In witness whereof, we, the said Richard Edward Hodges and William Brockedon, have hereunto set our hands and seals, this Twenty-fourth day of December, in the year of our Lord One thousand eight hundred 35 and fifty-one.

RICHARD EDWARD (L.S.) HODGES.
WILLIAM (L.S.) BROCKEDON.

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AND BE IT REMEMBERED, that on the Twenty-fourth day of December, in the year of our Lord 1851, the aforesaid Richard Edward Hodges and William Brockedon came before our said Lady the Queen in Her Chancery, and acknowledged the Specification aforesaid, and all and every thing therein
5 contained and specified, in form above written. And also the Specification aforesaid was stamped according to the tenor of the Statute made for that purpose.

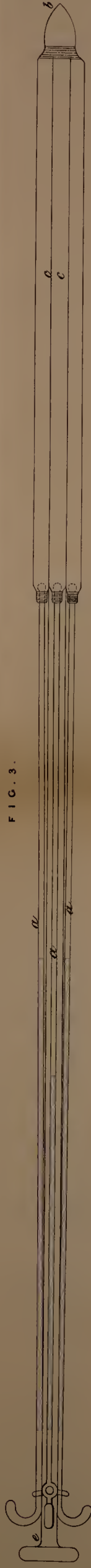
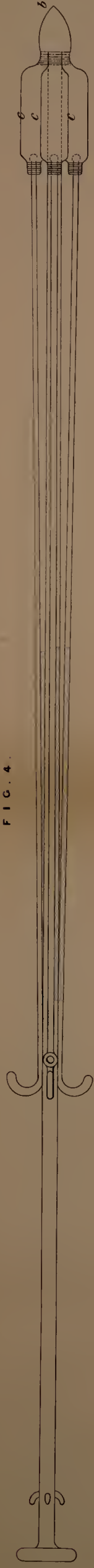
DREW.

Enrolled the Twenty-fourth day of December, in the year of Lord One thousand eight hundred and fifty-one.

LONDON :

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Printers to the Queen's most Excellent Majesty. 1857.

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The enrolled drawing is colored.

